



Communicable Disease and Epidemiology News

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- Gypsy Moth Spraying in Seattle's Madison Valley
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Gypsy Moth Spraying in Seattle's Madison Valley

To combat a potential gypsy moth infestation, the Washington State Department of Agriculture is planning to undertake aerial pesticide spraying of a 100 acre site of the Madison Valley area in Seattle in late April and May 2006. The pesticide which will be used, Foray 48B, contains the bacteria *Bacillus thuringiensis kurstaki*, or Btk. The area is bordered by 21st Avenue East, East Republican Street, Martin Luther King Jr. Way, and East Howell Street.

Bacillus thuringiensis species are naturally-occurring soil bacteria that produce toxins selective for various species of insects. In the case of Btk, the δ -endotoxin is toxic to gypsy moth larvae. Published data on acute toxicity to humans exposed through the oral and respiratory routes suggest that toxicity of Btk to humans and animals is extremely low to negligible. For more information, see the National Pesticide Information Center website at: npic.orst.edu/factsheets/BTgen.pdf and npic.orst.edu/factsheets/BTtech.pdf

More than 100 million pounds of Btk are used each year to control agricultural pests in the United States, including use by commercial landscapers, organic farmers and gardeners. Several surveillance studies have looked for health problems in persons living in areas where aerial spraying of Btk occurred; none have been able to link Btk to human illness. The most comprehensive study of Foray 48B was done by the Capital Health Region in Vancouver, British Columbia, and is available at: www.viha.ca/NR/rdonlyres/C41B2635-8A53-4F02-A8AD-EBECAE4CE34/6566/BTKWebAmalg2001.pdf This study included a case-control analysis of 29 asthmatic children, a health survey of adults, monitoring of physician and emergency department visits, laboratory-based surveillance, and environmental exposure measurements before and after the spraying. Interestingly, the investigators documented the Foray 48B strain of Btk on fruits and vegetables in local supermarkets, as well as in the nares of children within the spray zone, *before* the spraying began.

There was no change in any of the health indicators monitored, including peak expiratory flow rates in asthmatic children. One child had an exacerbation of asthma during the study period. Persons calling a health complaints hotline reported headache, shortness of breath, redness, itching, and burning of the eyes, stuffy or runny nose, sore throat, upset stomach or nausea, and a metallic taste. However, no differences in symptoms were found between 522 persons living inside the spray zone and 487 persons living outside the spray zone.

Laboratory-based surveillance for pesticide strain of Btk infections in Oregon after spraying did not implicate Btk in any human illness. Isolates that were recovered were considered contaminants in most cases.

Public Health and the WA State Department of Health monitored health-related complaints after aerial spraying with Foray 48B of the Ballard and Magnolia neighborhoods in Seattle in 2000. Fifty-nine complaints were received, which included mostly complaints of cough, headache, trouble breathing, sore throat, nasal congestion, and irritated eyes. Fourteen persons sought some kind of health care for symptoms. While it was not possible to epidemiologically link these symptoms to the aerial spraying, many affected residents felt that their symptoms were due to the spraying. For more information, please see:

www.doh.wa.gov/ehp/ts/Pest/AsianGypsyMothReport.pdf

In addition to Btk, the pesticide Foray 48B contains "inert" ingredients that are proprietary and cannot be revealed to the public. The U.S. EPA as well as the WA Poison Control Center have reviewed the list of inert ingredients and have concluded that the pesticide product, including the inert ingredients, has little to no toxicity.

Despite the lack of evidence for serious adverse health effects related to Foray 48B, we cannot conclude that there is no risk for unanticipated, less serious or infrequent health effects, particularly in persons who may be sensitive to the pesticide formulation. It is possible that some persons sensitive to inhaled allergens or irritants will experience allergic symptoms, respiratory irritation, or rash during the time of the Btk application, although it is not known that such symptoms are related to Btk spraying.

To minimize any chance of real or perceived adverse health effects, Public Health is recommending that all persons in the spray area minimize exposure to the pesticide at the time of the application by remaining indoors for 30 minutes after the application.

In particular, persons who have underlying illnesses that make them more susceptible to infections and respiratory irritation, such as leukemia, AIDS, other immune deficiencies, or who are receiving radiation or chemotherapy treatment or who have asthma, emphysema, or allergic sensitivities should review the following precautions:

- Remain indoors for at least 30 minutes following the spray application.
- Children should wait until moisture from the spray and dew has dried on grass and shrubs before they

play outside and should wash hands after playing outside.

- If you come in contact with the wet spray, wash the affected skin with soap and water. If wet material should get into the eyes, flush them with water for 15 minutes.
- Pets should be kept indoors and not allowed outside until the spray and dew has dried.

To report suspected or confirmed pesticide related illness or discuss potential adverse health effects, call the WA Poison Control Center at 1-800-222-1222, or the WA State Department of Health Pesticide Program at 1-888-586-9427, M-F, 8 AM - 5 PM.

For information about spraying, and to request to be notified of the exact dates and times of the spray application call the WA Department of Agriculture Gypsy Moth Hotline at 1-800-443-6684.

Physicians managing possible adverse reactions to Foray 48B can call the manufacturer’s 24-hour technical support line at 1-800-323-9597, through which specific ingredients may be released if medically necessary.

Additional information for health care providers and the public is available on the Public Health website at: www.metrokc.gov/health/env_hlth/gypsy.htm or by calling 206-205-4394. Recorded information about gypsy moth spraying can be heard on our hotline at (206)-296-4949.

In Memoriam: E. Russell “Russ” Alexander, MD

The public health community lost a great colleague, friend and mentor when E. Russell “Russ” Alexander died on February 26th, 2006 from complications of pancreatic cancer. Russ was the Chief of the Communicable Disease Section at Public Health from 1990 until his retirement in 1998. Russ’s illustrious career included many years at the Centers for Disease Control and Prevention, and 18 years at the University of Washington, where he was founding member of the School of Public Health and Community Medicine, the first Chair of the Department of Epidemiology, and Professor of Pediatrics.

Russ was a wonderful mentor to countless students and professional colleagues. His academic and public health accomplishments notwithstanding, Russ will be best remembered by those who knew and worked with him for his warmth, humor, and gentle nature. He will be dearly missed. Complete obituaries describing many of the important contributions Russ made can be found at:

http://www.nytimes.com/2006/03/20/national/20alexander.html?_r=1&oref=slogin (for New York Times subscribers)

seattletimes.nwsourc.com/html/obituaries/2002840844_alexanderobit03m.html

seattlepi.nwsourc.com/local/261096_russobit28.html

Disease Reporting

AIDS/HIV (206) 296-4645

STDs..... (206) 731-3954

TB (206) 731-4579

All Other Notifiable Communicable Diseases (24 hours a day) (206) 296-4774

Automated reporting line for conditions not immediately notifiable (206) 296-4782

Hotlines

Communicable Disease (206) 296-4949

HIV/STD (206) 205-STDS

Public Health-Seattle & King County Online Resources

Home Page: www.metrokc.gov/health/

The **EPI-LOG**: www.metrokc.gov/health/providers

Communicable Disease listserv (PHSKC INFO-X) at: mailman.u.washington.edu/mailman/listinfo/phskc-info-x

West Nile Virus Updates and Current Testing Guidelines:

www.metrokc.gov/health/westnile/advisories.htm

Reported Cases of Selected Diseases, Seattle & King County 2006				
	Cases Reported in February		Cases Reported Through February	
	2006	2005	2006	2005
Campylobacteriosis	8	17	35	33
Cryptosporidiosis	0	7	2	12
Chlamydial infections	444	459	812	867
Enterohemorrhagic E. coli (non-O157)	0	3	0	3
E. coli O157: H7	0	0	1	0
Giardiasis	8	8	13	19
Gonorrhea	139	93	262	204
Haemophilus influenzae (cases <6 years of age)	0	0	0	0
Hepatitis A	0	1	4	5
Hepatitis B (acute)	1	0	4	2
Hepatitis B (chronic)	64	42	118	84
Hepatitis C (acute)	0	0	0	2
Hepatitis C (chronic, confirmed/probable)	122	98	220	190
Hepatitis C (chronic, possible)	34	30	68	51
Herpes, genital (primary)	63	45	127	99
HIV and AIDS (new diagnoses only)	30	44	43	72
Measles	0	0	0	0
Meningococcal Disease	0	3	1	6
Mumps	1	0	1	0
Pertussis	12	3	28	20
Rubella	0	0	0	1
Rubella, congenital	0	0	0	0
Salmonellosis	10	18	26	36
Shigellosis	0	1	3	8
Syphilis	17	35	36	41
Syphilis, congenital	0	0	0	0
Syphilis, late	4	5	9	11
Tuberculosis	10	5	11	12

The *Epi-Log* is available in alternate formats upon request.